

WHAT IS CLAIMED IS:

1. A liquid jet recording head comprising:

a recording element substrate which includes a  
recoding liquid discharge port, and includes a

5 discharge energy generation element that generates a  
discharge energy;

a flexible film wiring substrate which includes  
an opening for exposing the recording element  
substrate to an outside, and includes a plurality of  
10 lead electrodes projecting inward of the opening, the  
flexible film wiring substrate connected to the  
recording element substrate so as to apply an  
electrical signal to the discharge energy generation  
element;

15 a plurality of electrode pads provided on the  
recording element substrate, the electrode pads  
electrically connected to the lead electrodes,  
respectively so as to electrically connect the  
recording element substrate to the flexible film  
20 wiring substrate; and

a dummy lead which is provided inward of the  
opening to protrude to be shorter than each of the  
lead electrodes, and which is not electrically  
connected to each of the electrode pad, the dummy  
25 lead provided to be adjacent to at least one lead  
electrode group comprising of a plurality of lead

electrodes among the plurality of lead electrodes.

2. The liquid jet recording head according to  
claim 1, wherein the dummy lead is provided on the  
5 flexible film wiring substrate.

3. The liquid jet recording head according to  
claim 1, wherein electric connection sections between  
the lead electrodes and the electrode pads, and the  
10 dummy lead are sealed by a sealing resin so as to  
cover the electric connection sections and the dummy  
leads.

4. The liquid jet recording head according to  
15 claim 1, wherein the dummy lead is provided near each  
of both end portions of the lead electrode group in  
an arrangement direction.

5. The liquid jet recording head according to  
20 claim 1, wherein the dummy lead is arranged at a  
pitch equal to a pitch at which the lead electrodes  
are arranged.

6. The liquid jet recording head according to  
25 claim 1, wherein a plurality of the recording element  
substrates are provided in the opening, and the dummy

lead is provided near end portions of the plurality of recording element substrates adjacent to each other.

5           7. The liquid jet recording head according to claim 1, wherein a plurality of the dummy leads are arranged between the adjacent lead electrode groups, thereby preventing a gap larger than a desired gap from being formed between the plurality of lead  
10 electrodes.

8. The liquid jet recording head according to claim 1, wherein a gap between each of the lead electrodes and the dummy lead is set to fall within a  
15 range of  $0.75P \leq P \leq 1.25P$ , where  $P$  is an arrangement pitch of the plurality of lead electrodes.

9. The liquid jet recording head according to claim 1, wherein the dummy lead has a larger width  
20 than a width of each of the lead electrodes, thereby preventing a gap larger than a predetermined gap from being formed between the plurality of lead electrodes.

10. The liquid jet recording head according to  
25 claim 1, wherein the lead electrodes and the dummy lead are manufactured in a same manufacturing step.